33621

COLORADO DEPARTMENT OF HEALTH
Richard D. Lamm
Governor
Thomas M. Vernon, M.D.
Executive Director

April 29, 1986

86 MAY 7 A8:03

Mr. Ken Greer
Rocky Flats Area Office
U.S. Department of Energy
P.O. Box 928
Golden, Colorado 80402

Dear Mr. Greer:

As requested during our meeting on March 5, 1986, Colorado Department of Health and EPA Region VIII personnel have reviewed Rocky Flats Sampling and Analysis Plan for the Solar Pond 207B-North, Interceptor Trench Pump House, and West Spray Field. Both CDH and EPA comments were transmitted to you by phone by Mr. Fred Dowsett of CDH on March 13, 1986. This letter provides those comments in writing.

The comments of the Colorado Department of Health Waste Management Division are as follows:

1. Groundwater monitoring wells 4-82, 5-82, 6-82, and 9-82 should be sampled to provide an indication of possible groundwater contamination. Although these wells are north of the area with greater spray concentration, they may pick up down-gradient flow if the flow directions are to the northeast rather than to the east. We have insufficient data to determine flow directions accurately in the spray field area. The four listed wells are probably screened in the alluvium and hopefully will provide samples of the uppermost aquifer.

2. Soil sampling should be done to a depth of 2'(24 inches). Soils in the area of the spray field were described in the Rocky Flats EIS as cobbly, gravelly, sandy loam with moderate permeability. Exposure of those soils to winds such as these in the Rocky Flats area may result in winnowing of fine materials from the surface layers causing increased permeability and reduced adsorption capacity. Surface water may infiltrate fairly rapidly through the surface layer leaving little evidence of contamination. Deeper layers may show higher contaminant levels and should be included in the sampling plan. This may be addressed in a later phase of sampling.

A-OU04-000322

1/3

4210 EAST 11TH AVENUE DENVER,COLORADO 80220 PHONE (303) 320-8333

3. Page 3, paragraph 1. Refers to two spray areas each 1200'x2000' while page 6 refers to one area 1200'x2000'. They should clarify the number of fields.

4. Page 11, Section 3.3.1. For colletion of VOA samples immersion of sample container should be done slowly and in a manner that minimizes agitation or aeration of the sample.

5. Page 12 - Calibration of pH and conductivity test equipment should be performed at the sample sites just prior to taking sample measurements, not just in the laboratory prior to beginning sampling

6. Page 15, Section 3.4. List for instrumentation should include calibration standards for the conductivity meter.

7. Add implementation schedule.

The comments of the EPA Region VIII Waste Management Division are as follows:

1. Section 3.3.3 - Contains sampling methodology for non-irrigated spray field samples only. The procedures for the irrigated spray field should be specifically stated. Special procedures are needed for equipment decontamination between soil samplings to insure that cross-contamination does not occur.

2. Section 3.3.3 - There is a need to decontaminate equipment during sampling of the non-irrigated areas. Greater consistency of results will be achieved for the following reasons:
   a. Spreading of contamination between samples which would give elevated background levels will be prevented.
   b. Cross-contamination between zones of the samples will be prevented. This is critical since the front edge of the split-spoon sampler must penetrate the 0-6 inch zone prior to entering the 6-12 inch zone.
   c. It is assumed that similar decontamination procedures will be used for sampling the irrigated spray field.

3. The sampling procedures do not mention vegetation handling for the spray fields. In developing the "Equipment and procedures for Soil Sampling in Edgemont, South Dakota Area", EPA established procedures for handling vegetation around sample points. Similar procedures may be needed at Rocky Flats.

2

4. Section 3.3.1 - The procedures for sampling pond 207-B will not give representative samples. Surface water samples for volatile organic compounds is fine. Heavy metals and radioactive isotopes will be found at varying concentrations depending on the depth of the pond. Two additional sets (3 samples each) of samples - one surface, one mid-depth, and one bottom sample should be taken from pond 207-B for a more uniform characterization of the waste.

5. Section 3.2.3 - The report states that "surface core (0-6") and subsurface cores (6-12") will be collected." Review of the December 9,1985, HydroSearch, Inc report entitled, "Hydrogeologic Characterization of the Rocky Flats Plant", indicates that further surface samples are needed. The soil characterization indicates that the majority of heavy metals will be contained in the upper crust (0-2") with the most potentially hazardous material on the surface. It is recommended that DOE consider the following additional samples:

   a. A scrape sample of the surface. This is the material most likely to be carried by wind and may be the largest source of off-site health effect from the study area.

   b. Surface core from 0-2", mid-depth core from 2-4", and deep core from 6-12". This sampling will give a better picture of the leachable profile of the soils and the effects of liquids on concentration levels.

If you have any questions regarding these comments please contact Mr. Donald N. Rasch of the U.S. EPA RCRA Compliance Monitoring Section at (303) 293-1503
or Mr. Fred Dowsett, Colorado Department of Health Waste Management Division at (303) 320-8333 X 4364.

Sincerely,

Joan W. Sowinski

Joan W. Sowinski
Section Chief
Compliance and Enforcement Section
Waste Management Division

cc: Donald N. Rasch, EPA

3/3